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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,495	05/25/2001	David E. Patterson	3017-55	4882

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EXAMINER

ZEMAN, MARY K

ART UNIT	PAPER NUMBER
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1631

DATE MAILED: 08/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/866,495

Applicant(s)

PATTERSON ET AL.

Examiner

Mary K Zeman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-7 are pending in this application.

Applicant's arguments filed 5/25/04 have been fully considered but they are not persuasive. Any rejection not repeated below has been withdrawn.

The examiner attempted to contact Applicant's representative regarding any potential supplemental amendments or arguments, but was unable to do so by the date of this communication.

Rejections maintained

Claims 1-7 remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant asserts that the amendments made to the claims obviate the rejection, and that the limitations of the preambles should be read as a limiting means to said claims. These arguments have been considered but are not persuasive. The specification does not describe any molecules. There is no class, subclass or general structure of molecule being claimed. There is no specific core molecule to which the molecules are compared or combined. The claims now refer to molecules "which possess desired properties" without specifically naming any properties. The limitations regarding diversity sampling do not appear to limit the molecules themselves, but limit the method by which they are chosen. While Applicant's methods of identifying molecules may be described, the molecules themselves are not. Applicant is again directed to the guidelines on reach-through claims cited below.

The claims are drawn to virtual molecules which "could be made" from unspecified reactants and an unspecified common core through a computer-based methods. There are no actual molecules described by the claims. No particular families or types of molecules are described in the claims. The claims do not set forth any structural limitations which would limit the claimed molecules to a particular type or

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class. The claims do not set forth any functional limitations which could effectively limit the underlying structure of the molecules being claimed. The claimed molecules are to be made from reactants and common core molecules which are produced by a computer method operating on a virtual library. These are product-by-process type claims. The products themselves are not described in the specification, and therefore, there is no possession of the claimed invention. The process steps themselves do not produce any specific molecular structures or molecules- the end of the process results in the outputting a list of reactants which could be used in the creation of the claimed molecule. The specification, as filed, does not set forth any structures or particular molecules such as those being claimed. The entirety of the specification is directed to the process steps regarding data processing, virtual library creation and the application of validated molecular descriptors. None of this is a description of molecules that could be made in a combinatorial synthesis of reactants and a common core, as set forth in the claims. As such, the claims lack written description in the specification as filed. Applicant is encouraged to consult the Trilateral Project B3b on "reach-through claims".

<http://www.uspto.gov/web/tws/sr-3.htm>

Claims 1-7 remain rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific, substantial or credible asserted utility or a well established utility.

Applicant asserts that the amendments made to the claims obviate the rejection, and that the limitations of the preambles should be read as a limiting means to said claims. These arguments have been considered but are not persuasive. The specification does not describe any molecules. There is no class, subclass or general structure of molecule being claimed. There is no specific core molecule to which the molecules are compared or combined. The claims now refer to molecules "which possess desired properties" without specifically naming any properties. The limitations regarding diversity sampling do not appear to limit the molecules themselves, but limit the method by which they are chosen. While Applicant's methods of identifying molecules may

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have utility, the molecules themselves do not. Applicant is again directed to the guidelines on reach-through claims cited in the rejection under written description.

The claims are drawn to molecules which are selected in a computer-based process by a particular process. No molecules are actually made. No specific molecules are recited. No specific functions, activities, or use for the molecules are set forth in the claims. There are no actual molecules described by the claims. No particular families or types of molecules are described in the claims. The claims do not set forth any structural limitations which would limit the claimed molecules to a particular type or class. The claims do not set forth any functional limitations which could effectively limit the underlying structure of the molecules being claimed. As such, there is no specific, substantial and credible utility for the nonspecific, possible, virtual molecules set forth in the claims.

Claims 1-7 also remain rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a specific, substantial or credible asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

Claims 1-7 remain rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Applicants arguments have been fully considered, but are not persuasive. Applicant argues that the claims are directed to concrete, tangible and useful results, and that the specification teaches that the process steps overcome well known problems in the art. However, the claims are drawn to products that have no specific structure, or function or even any tangible identity. Furthermore, the process steps in the claims do not end with assembled molecules, but with lists of reactants and cores that must be further acted upon to be used. This does not meet the standard of concrete, tangible and useful.

Applicant asserts that the amendments made to the claims obviate the rejection, and that the limitations of the preambles should be read as a limiting means to said claims. These arguments have been considered but are not persuasive. The specification

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does not describe any molecules. There is no class, subclass or general structure of molecule being claimed. There is no specific core molecule to which the molecules are compared or combined. The claims now refer to molecules "which possess desired properties" without specifically naming any properties. The limitations regarding diversity sampling do not appear to limit the molecules themselves, but limit the method by which they are chosen. While Applicant's methods of identifying molecules may have utility, the molecules themselves do not. Applicant is again directed to the guidelines on reach-through claims cited in the rejection under written description.

As set forth previously, the claims are drawn to nonfunctional descriptive material. The claims are drawn to data representations of selected molecules that "could be made in a combinatorial synthesis of specified reactants and a common core" those molecules being selected by a particular computer-implemented method. These selected molecules are mere presentations of information or abstract ideas which have not been practically applied. (see, e.g., *In re Warmerdam*, 33 F.3d 1354, 1361, 31 USPQ 2d 1754, 1760 (Fed. Cir. 1994) (descriptive material *per se* is not patent eligible subject matter). No physical molecules are actually created or synthesized, and the data generated by the computer implemented method is merely a list of data structures meeting particular limitations and thresholds. See also the Report on Comparative Study in New Technologies Carried Out Under Trilateral Project WM4 accessible on the World Wide Web at: http://www.uspto.gov/web/tws/wm4/wm4_index.htm

Claims 1-7 remain rejected under 35 U.S.C. 102(e) as being anticipated by Agrafiotis et al. (5,463,564).

Applicant does not specifically address this rejection in the response. Applicant's previous arguments regarding this rejection have been fully considered, but they are not persuasive. Applicant's arguments are directed to the process steps set forth in the product claims. However, the products of Agrafiotis are equivalent to the products being claimed absent evidence to the contrary. Since no physical products are actually identified or produced in the claims, the process limitations cannot be said to materially affect the nature of the product. The only apparent limitation in the claim that limits the

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nature of the molecules is that they could be made in a combinatorial synthesis of a reactant and a core. Therefore, Agrafiotis meets the limitations of the claims.

Applicant asserts that the amendments made to the claims obviate all the rejections of record, and that the limitations of the preambles should be read as a limiting means to said claims. These arguments have been considered but are not persuasive. The specification does not describe any molecules. There is no class, subclass or general structure of molecule being claimed. There is no specific core molecule to which the molecules are compared or combined. The claims now refer to molecules "which possess desired properties" without specifically naming any properties. The limitations regarding diversity sampling do not appear to limit the molecules themselves, but limit the method by which they are chosen. While Applicant's methods of identifying molecules may have utility, the molecules themselves do not. Applicant is again directed to the guidelines on reach-through claims cited in the rejection under written description.

As set forth previously, the claims are drawn to data representations of selected molecules that "could be made in a combinatorial synthesis of specified reactants and a common core" those molecules being selected by a particular computer-implemented method. These are product-by-process claims drawn to nonfunctional descriptive material. Agrafiotis (USP 5,463,564- of record in 08/592132) discloses representations of molecules that could be created in a combinatorial synthesis of specified reactants and a common core. As such, this disclosure provides the same non-functional descriptive material as that being claimed.

Conclusion

No claim is allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary K Zeman whose telephone number is (571) 272 0723

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P Woodward can be reached on (571) 272 0722. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

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MARY K. ZEMAN
PRIMARY EXAMINER
1631
8/4/04